

WHAT IS CLAIMED IS:

1. A system for call forwarding, comprising:

a telephone subsystem operable to communicate with a telephonic device;

a wireless subsystem operable to communicate with a mobile station, the mobile

5 station associated with the telephonic device; and

a packet subsystem coupled to the telephone subsystem and the wireless subsystem, the packet subsystem operable to instruct the telephone subsystem to forward a telephone call directed at the telephonic device to the packet subsystem after the mobile station registers with the wireless subsystem, the packet subsystem also operable to communicate the
10 telephone call to the wireless subsystem for delivery to the mobile station.

2. The system of Claim 1, wherein the packet subsystem is operable to instruct the telephone subsystem to forward the telephone call by instructing the telephone subsystem to invoke at least one of a call forwarding feature, a call monitoring feature, a call deflection
15 feature, and a remote call forwarding feature.

3. The system of Claim 2, wherein the packet subsystem is operable to instruct the telephone subsystem to invoke one or more of the features using at least one of a Computer Telephony Integration interface to the telephone subsystem, a signaling channel in
20 a trunk interface to the telephone subsystem, a signaling channel in a line interface to the telephone subsystem, an administration port in the telephone subsystem, a teleworking server coupled to the telephone subsystem, and a telephone emulator coupled to the telephone subsystem.

25 4. The system of Claim 1, wherein the packet subsystem is also operable to forward a second telephone call directed at the mobile station to the telephonic device associated with the mobile station after the mobile station deregisters.

5. The system of Claim 1, wherein the packet subsystem comprises:
a wireless adjunct internet platform operable to communicate with at least one base station, the base station operable to communicate with the mobile station;
a gateway operable to communicate with the wireless adjunct internet platform and
5 the telephone subsystem; and
a gatekeeper operable to generate signaling messages to control the telephone subsystem.

6. The system of Claim 1, wherein:
10 the telephone subsystem comprises a private branch exchange;
the wireless subsystem supports a Global System for Mobile communication (GSM) standard; and
the packet subsystem supports an International Telecommunications Union-
Telecommunications (ITU-T) H.323 standard.

15

7. A method for call forwarding, comprising:

allowing a telephone subsystem to direct a first telephone call to a telephonic device when a mobile station is not registered, the mobile station associated with the telephonic device;

5 detecting the mobile station registering with a wireless subsystem, the wireless subsystem coupled to the telephone subsystem by a packet subsystem; and

instructing the telephone subsystem to forward a second telephone call directed at the telephonic device to the packet subsystem, the packet subsystem operable to receive the second telephone call from the telephone subsystem and to communicate the second
10 telephone call to the wireless subsystem for delivery to the mobile station.

8. The method of Claim 7, wherein instructing the telephone subsystem to forward the second telephone call comprises instructing the telephone subsystem to invoke at least one of a call forwarding feature, a call monitoring feature, a call deflection feature, and
15 a remote call forwarding feature.

9. The method of Claim 8, wherein instructing the telephone subsystem to invoke at least one of the features comprises instructing the telephone subsystem using at least one of a Computer Telephony Integration interface to the telephone subsystem, a signaling channel
20 in a trunk interface to the telephone subsystem, a signaling channel in a line interface to the telephone subsystem, an administration port in the telephone subsystem, a teleworking server coupled to the telephone subsystem, and a telephone emulator coupled to the telephone subsystem.

10. The method of Claim 7, further comprising forwarding a third telephone call
25 directed at the mobile station to the telephonic device associated with the mobile station after the mobile station deregisters.

further comprising:

receiving a third telephone call from a second mobile station directed at the

routing the third telephone call through the wireless subsystem and the packet

12. The method of Claim 7, wherein instructing the telephone subsystem to

forward the second telephone call comprises instructing the telephone subsystem to forward the second telephone call to a gateway in the packet subsystem.

13. A system for call forwarding, comprising:

at least one computer processable medium; and

logic encoded on the at least one computer processable medium and operable to:

allow a telephone subsystem to direct a first telephone call to a telephonic
5 device when a mobile station is not registered, the mobile station associated with the
telephonic device;

detect the mobile station registering with a wireless subsystem, the wireless
subsystem coupled to the telephone subsystem by a packet subsystem; and

instruct the telephone subsystem to forward a second telephone call directed at
10 the telephonic device to the packet subsystem, the packet subsystem operable to receive the
second telephone call from the telephone subsystem and to communicate the second
telephone call to the wireless subsystem for delivery to the mobile station.

14. The system of Claim 13, wherein the logic is operable to instruct the telephone
15 subsystem to forward the second telephone call by instructing the telephone subsystem to
invoke at least one of a call forwarding feature, a call monitoring feature, a call deflection
feature, and a remote call forwarding feature.

15. The system of Claim 14, wherein the logic is operable to instruct the telephone
20 subsystem to invoke one or more of the features using at least one of a Computer Telephony
Integration interface to the telephone subsystem, a signaling channel in a trunk interface to
the telephone subsystem, a signaling channel in a line interface to the telephone subsystem,
an administration port in the telephone subsystem, a teleworking server coupled to the
telephone subsystem, and a telephone emulator coupled to the telephone subsystem.

25 16. The system of Claim 13, wherein the logic is further operable to forward a
third telephone call directed at the mobile station to the telephonic device associated with the
mobile station after the mobile station deregisters.

17. The system of Claim 13, wherein the mobile station comprises a first mobile station; and

wherein the logic is further operable to route a third telephone call from a second mobile station directed at the first mobile station through the wireless subsystem and the packet subsystem without routing the third telephone call through the telephone subsystem.

18. The system of Claim 13, wherein the logic is operable to instruct the telephone subsystem to forward the second telephone call to a gateway in the packet subsystem.

5

19. A system for call forwarding, comprising:
a telephone subsystem operable to communicate with a telephonic device;
a wireless subsystem operable to communicate with a mobile station, the wireless
subsystem comprising at least one base station operable to communicate with the mobile
station over a wireless interface, the mobile station associated with the telephonic device; and
5 a packet subsystem coupled to the telephone subsystem and the wireless subsystem,
the packet subsystem comprising:
a wireless adjunct internet platform operable to communicate with the base
station;
10 a gateway operable to communicate with the wireless adjunct internet platform
and the telephone subsystem;
a gatekeeper operable to instruct the telephone subsystem to forward a first
telephone call directed at the telephonic device to the gateway after the mobile station
registers with the wireless subsystem;
15 the gatekeeper operable to instruct the telephone subsystem to forward the first
telephone call by instructing the telephone subsystem to invoke at least one of a call
forwarding feature, a call monitoring feature, a call deflection feature, and a remote call
forwarding feature;
the gatekeeper operable to instruct the telephone subsystem to invoke one or
20 more of the features using at least one of a Computer Telephony Integration interface to the
telephone subsystem, a signaling channel in a trunk interface to the telephone subsystem, a
signaling channel in a line interface to the telephone subsystem, an administration port in the
telephone subsystem, a teleworking server coupled to the telephone subsystem, and a
telephone emulator coupled to the telephone subsystem; and
25 the gatekeeper further operable to instruct the gateway to forward a second
telephone call directed at the mobile station to the telephonic device associated with the
mobile station after the mobile station deregisters.

20. A method for call forwarding, comprising:

allowing a telephone subsystem to direct a first telephone call to a telephonic device when a first mobile station is not registered, the first mobile station associated with the telephonic device;

5 detecting the first mobile station registering with a wireless subsystem, the wireless subsystem coupled to the telephone subsystem by a packet subsystem;

10 instructing the telephone subsystem to invoke at least one of a call forwarding feature, a call monitoring feature, a call deflection feature, and a remote call forwarding feature using at least one of a Computer Telephony Integration interface to the telephone subsystem, a signaling channel in a trunk interface to the telephone subsystem, a signaling channel in a line interface to the telephone subsystem, an administration port in the telephone subsystem, a teleworking server coupled to the telephone subsystem, and a telephone emulator coupled to the telephone subsystem, the at least one feature causing the telephone subsystem to forward a second telephone call directed at the telephonic device to a gateway in the packet subsystem, the gateway operable to receive the second telephone call and to communicate the second telephone call to the wireless subsystem for delivery to the mobile station;

15 routing a third telephone call from a second mobile station directed at the first mobile station through the wireless subsystem and the packet subsystem without routing the third telephone call through the telephone subsystem; and

20 instructing the gateway to forward a fourth telephone call directed at the first mobile station to the telephonic device associated with the first mobile station after the first mobile station deregisters.

21. A system for call forwarding, comprising:

at least one computer processable medium; and

logic encoded on the at least one computer processable medium and operable to:

allow a telephone subsystem to direct a first telephone call to a telephonic

5 device when a first mobile station is not registered, the first mobile station associated with the telephonic device;

detect the first mobile station registering with a wireless subsystem, the wireless subsystem coupled to the telephone subsystem by a packet subsystem;

10 instruct the telephone subsystem to invoke at least one of a call forwarding feature, a call monitoring feature, a call deflection feature, and a remote call forwarding feature using at least one of a Computer Telephony Integration interface to the telephone subsystem, a signaling channel in a trunk interface to the telephone subsystem, a signaling channel in a line interface to the telephone subsystem, an administration port in the telephone subsystem, a teleworking server coupled to the telephone subsystem, and a telephone
15 emulator coupled to the telephone subsystem, the at least one feature causing the telephone subsystem to forward a second telephone call directed at the telephonic device to a gateway in the packet subsystem, the gateway operable to receive the second telephone call and to communicate the second telephone call to the wireless subsystem for delivery to the mobile station;

20 route a third telephone call from a second mobile station directed at the first mobile station through the wireless subsystem and the packet subsystem without routing the third telephone call through the telephone subsystem; and

instruct the gateway to forward a fourth telephone call directed at the first mobile station to the telephonic device associated with the first mobile station after the first
25 mobile station deregisters.

22. A system for call forwarding, comprising:

a telephone subsystem operable to communicate with a telephonic device;

a client associated with the telephonic device and operable to operate in an active state and a non-active state, the active state indicating that calls to the telephonic device should be forwarded to the client, the non-active state indicating that calls to the client should be forwarded to the telephonic device;

a gateway operable to communicate with the client and the telephone subsystem; and

a gatekeeper operable to instruct the telephone subsystem to forward a first telephone call directed at the telephonic device to the gateway when the client is operating in the active state, the gatekeeper further operable to instruct the gateway to forward a second telephone call directed at the client to the telephone subsystem when the client is operating in the non-active state.

23. The system of Claim 22, wherein the gatekeeper is operable to instruct the telephone subsystem to forward the first telephone call by instructing the telephone subsystem to invoke at least one of a call forwarding feature, a call monitoring feature, a call deflection feature, and a remote call forwarding feature.

24. The system of Claim 23, wherein the gatekeeper is operable to instruct the telephone subsystem to invoke one or more of the features using at least one of a Computer Telephony Integration interface to the telephone subsystem, a signaling channel in a trunk interface to the telephone subsystem, a signaling channel in a line interface to the telephone subsystem, an administration port in the telephone subsystem, a teleworking server coupled to the telephone subsystem, and a telephone emulator coupled to the telephone subsystem.

25. The system of Claim 22, wherein:

the client comprises a gateway to a wireless subsystem, the wireless subsystem operable to communicate with a mobile station;

the client operates in the active state when the mobile station is registered; and

the client operates in the non-active state when the mobile station is unregistered.

$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$

27. A method for call forwarding, comprising:

determining whether a client associated with a telephonic device is operating in an active state or a non-active state, the active state indicating that calls to the telephonic device should be forwarded to the client, the non-active state indicating the calls to the client should be forwarded to the telephonic device, the telephonic device operable to communicate with a telephone subsystem;

instructing the telephone subsystem to forward a first telephone call directed at the telephonic device to a gateway coupled to the client if the client is in the active state, the gateway operable to receive the first telephone call from the telephone subsystem and to communicate the first telephone call to the client; and

instructing the gateway to forward a second telephone call directed at the client to the telephone subsystem if the client is in the non-active state.

28. The method of Claim 27, wherein:

the client comprises a gateway to a wireless subsystem, the wireless subsystem operable to communicate with a mobile station;

the client operates in the active state when the mobile station is registered; and

the client operates in the non-active state when the mobile station is unregistered.

29. The method of Claim 27, wherein the client comprises at least one of a voice over packet telephone, a computing device, and a gateway operable to communicate with another communication system.

30. The method of Claim 27, wherein instructing the telephone subsystem to forward the first telephone call comprises instructing the telephone subsystem to invoke at least one of a call forwarding feature, a call monitoring feature, a call deflection feature, and a remote call forwarding feature.

31. The method of Claim 30, wherein instructing the telephone subsystem to invoke at least one of the features comprises instructing the telephone subsystem using at least one of a Computer Telephony Integration interface to the telephone subsystem, a signaling channel in a trunk interface to the telephone subsystem, a signaling channel in a line interface to the telephone subsystem, an administration port in the telephone subsystem, a teleworking server coupled to the telephone subsystem, and a telephone emulator coupled to the telephone subsystem.
- 5

32. A system for call forwarding, comprising:

at least one computer processable medium; and

logic encoded on the at least one computer processable medium and operable to:

determine whether a client associated with a telephonic device is operating in

5 an active state and a non-active state, the active state indicating that calls to the telephonic device should be forwarded to the client, the non-active state indicating the calls to the client should be forwarded to the telephonic device, the telephonic device operable to communicate with a telephone subsystem;

10 instruct the telephone subsystem to forward a first telephone call directed at the telephonic device to a gateway coupled to the client if the client is in the active state, the gateway operable to receive the first telephone call from the telephone subsystem and to communicate the first telephone call to the client; and

15 instruct the gateway to forward a second telephone call directed at the client to the telephone subsystem if the client is in the non-active state.

33. The system of Claim 32, wherein:

the client comprises a gateway to a wireless subsystem, the wireless subsystem operable to communicate with a mobile station;

the client operates in the active state when the mobile station is registered; and

20 the client operates in the non-active state when the mobile station is unregistered.

34. The system of Claim 32, wherein the client comprises at least one of a voice over packet telephone, a computing device, and a gateway operable to communicate with another communication system.

25 35. The system of Claim 32, wherein the logic is operable to instruct the telephone subsystem to forward the first telephone call by instructing the telephone subsystem to invoke at least one of a call forwarding feature, a call monitoring feature, a call deflection feature, and a remote call forwarding feature.

5